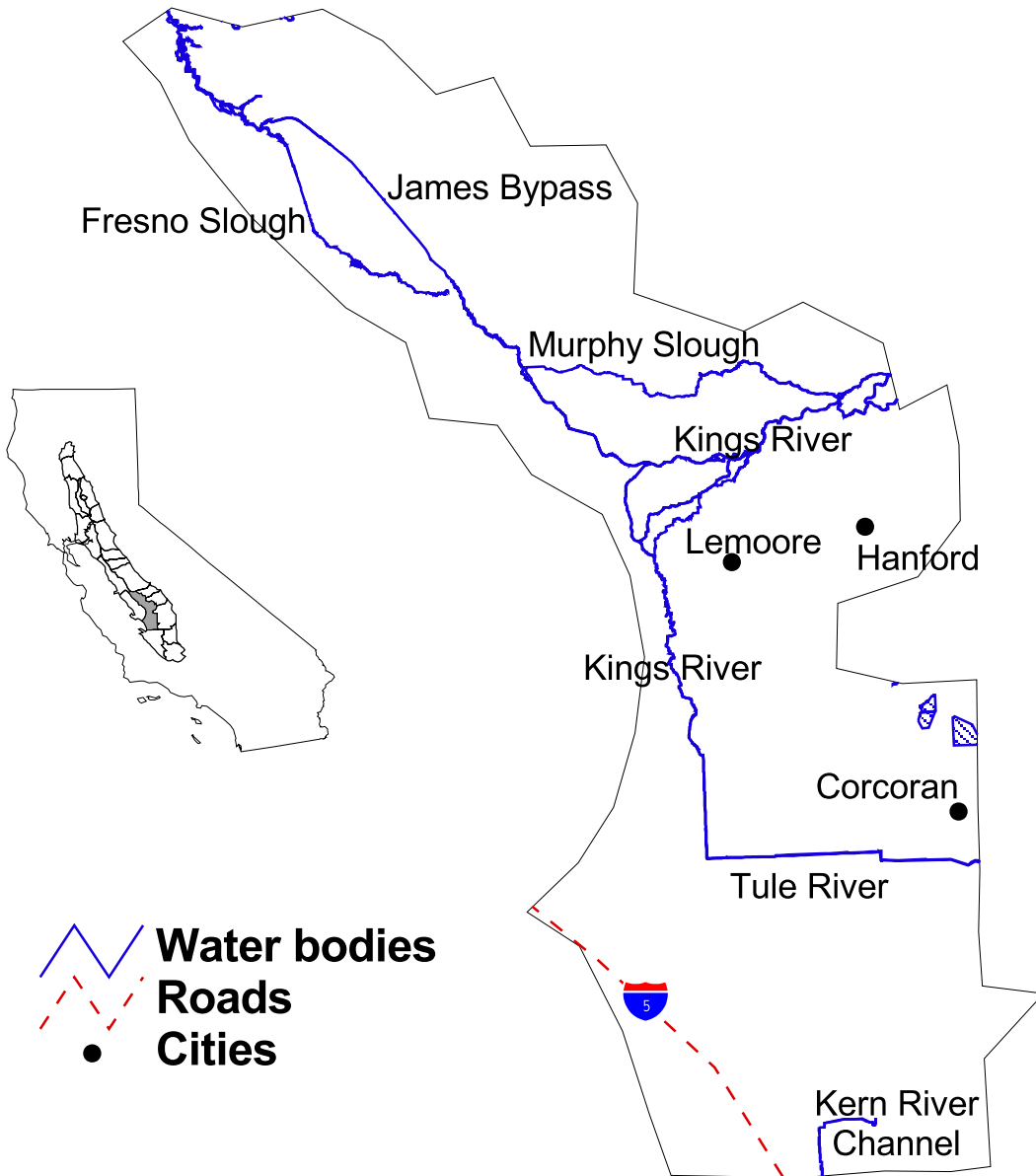


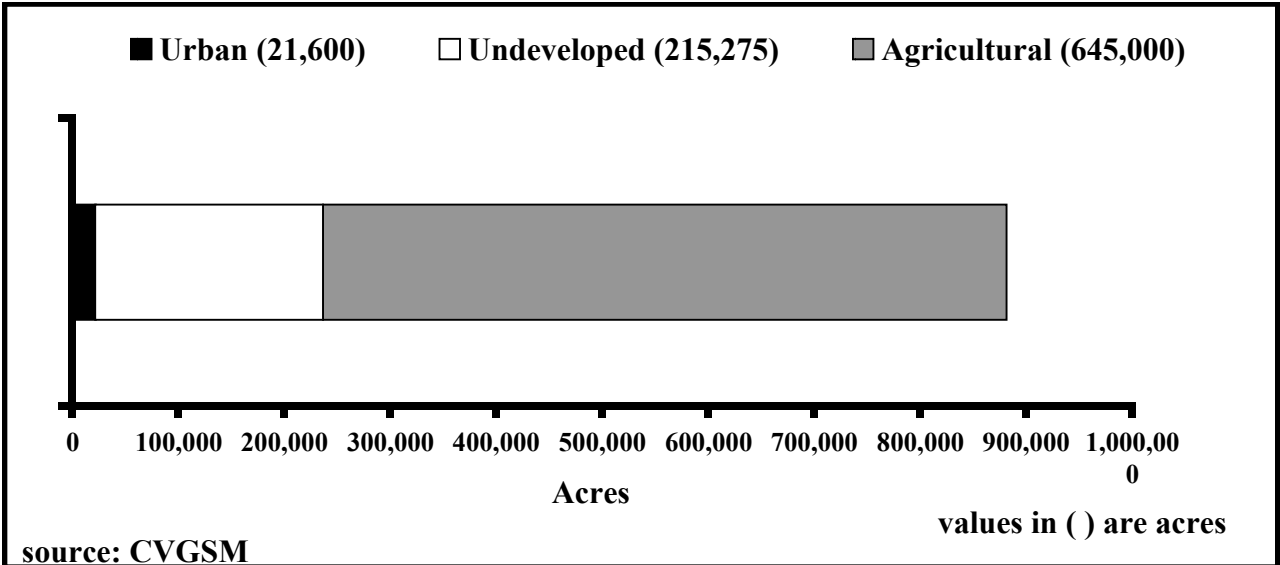
Sub-Region 15, Mid-Valley Area



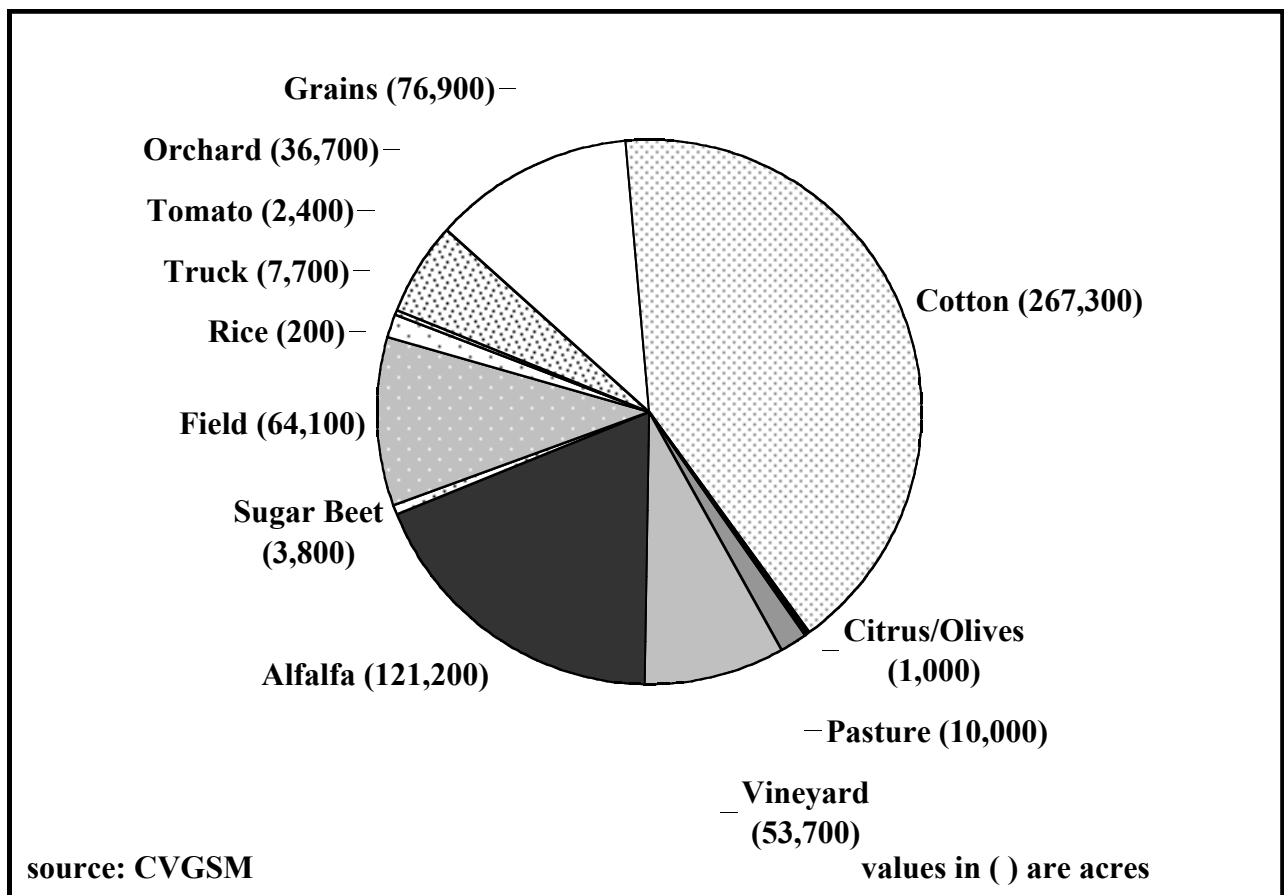
0 6 12 Miles



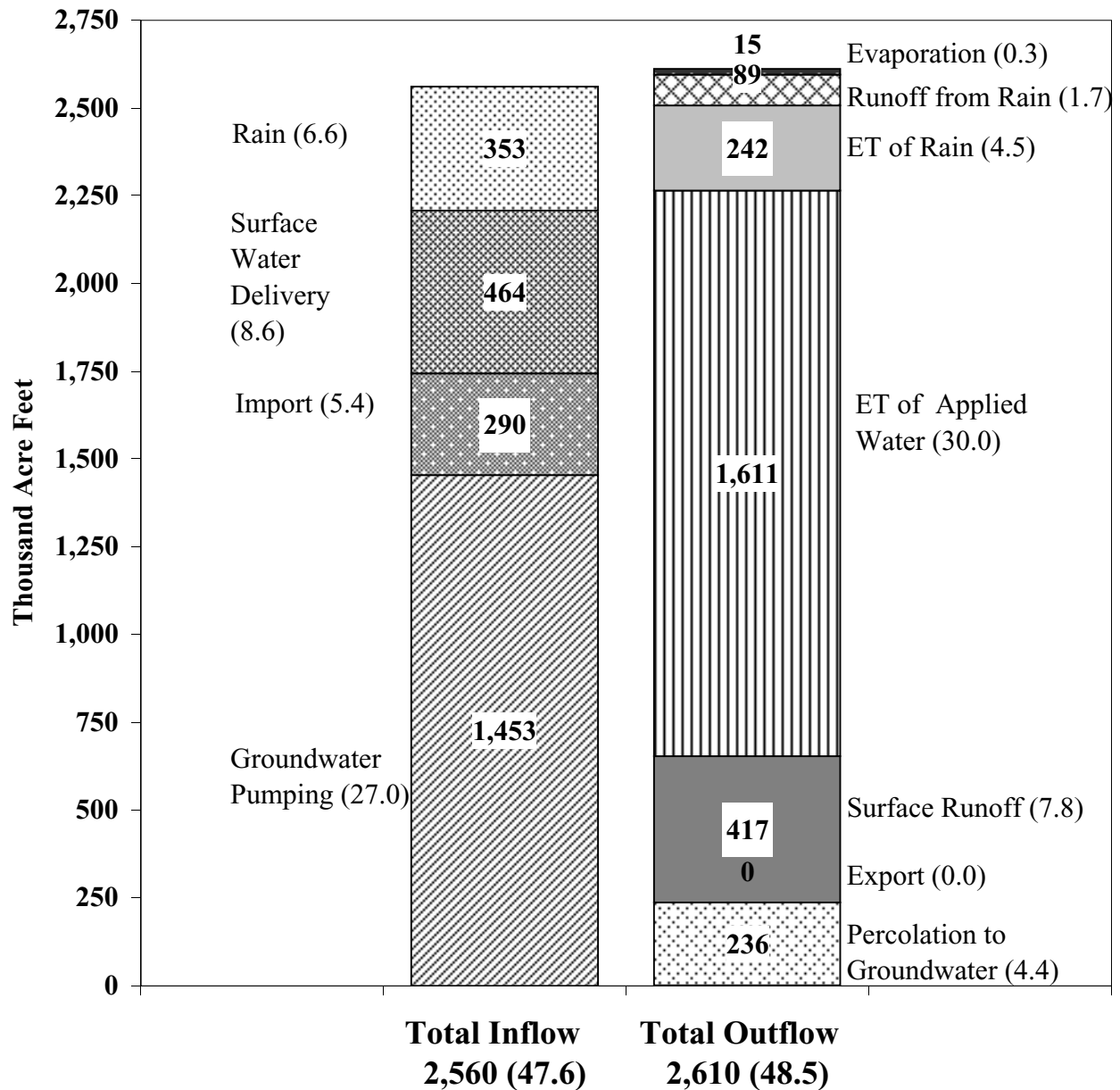
**Figure A.15.2 Land Use, Sub-Region 15,
Mid-Valley Area.**



**Figure A.15.3 Cropping Pattern, Sub-Region 15,
Mid-Valley Area.**



Sub-Region 15 Water Balance



Farm Water Balance, Average Year, Sub-Region 15, Mid-Valley Area. Values are Thousand Acre-Feet, with inches per acre shown in (. All data is from the Central Valley Ground and Surface Water Model (CVGSM).

**Table A.15.1. Descriptive List of Targeted Benefits, Sub-Region 15,
Mid-Valley Area**

| TB # (1) [duplicate] | Location (2) | Category of Targeted Benefit (3) | Bene- ficiary (4) | General Time- Frame (5) | Conceptual Completeness (6) |
|---------------------------------|-------------------------|--|----------------------------------|--|--|
| 167 | All affected lands | Quantity: Decrease flows to salt sinks to increase the water supply for beneficial uses | Eco, Ag or M&I | Irrigation season | Complete |
| 168 | All affected lands | Quantity: Decrease nonproductive ET to increase water supply for beneficial uses | Eco, Ag or M&I | Year round | Complete |
| 169 | All suitable lands | Quantity: Provide long-term diversion flexibility to increase the water supply for beneficial uses | Eco, Ag or M&I | TBD | Incomplete |
| 170 | Salt affected soils | Quantity: Provide long-term diversion flexibility to increase the water supply for beneficial uses | Ag | Irrigation season | Complete |

**Table A.15.2. Quantified Targeted Benefits, Sub-Region 15,
Mid-Valley Area**

| TB # (1) [duplicate] | Source and Description of Quantified Targeted Benefit (7) |
|---------------------------------|---|
| 167 | Core: Reduce existing flows to salt sinks by _____ acre-feet per year. |
| 168 | Core: Reduce unwanted ET by _____ acre-feet per year. |
| 169 | Core: Enhance the effectiveness of potential conjunctive use programs by reducing flows to groundwater to _____ acre feet per year during periods of shortage; and increasing flows to groundwater to _____ acre feet per year during periods of excess. |
| 170 | Core: While remaining within the salinity threshold for a given crop, take advantage of periodic opportunities to reduce salinity impacts by increasing leaching by _____ during periods of excess supply and by reducing by _____ leaching during water short periods. |

**Table A.15.3. Quantified Targeted Benefit Change, Sub-Region 15,
Mid-Valley Area**

| TB # (1) [duplicate] | Reference Condition | | Quantified Targeted Benefit | | Quantified Targeted Benefit Change | | | Specific Time-Frame (11) |
|---------------------------------|----------------------------|------------------------------|------------------------------------|------------------------------|---|------------------------------|-----------------------------|---------------------------------|
| | Data Source (8) | Data Availability (9) | Data Source (8) | Data Availability (9) | Data Source (8) | Data Availability (9) | Range of Values (10) | |
| 167 | CVGSM/Core | Rough estimate | Core | Rough estimate | Calculated | Rough estimate | <1 TAF/yr | Irrigation season |
| 168 | CVGSM | Unproven-precise | Core | Rough estimate | Calculated | Rough estimate | 6.1 TAF/yr | TBD |
| 169 | CVGSM | Unproven-precise | Core | Rough estimate | Calculated | Rough estimate | TBD | TBD |
| 170 | Core | Rough estimate | Core | Rough estimate | Calculated | Rough estimate | TBD | Irrigation season |

**Table A.15.4. Quantifiable Objective, Sub-Region 15,
Mid-Valley Area**

| TB # (1) [duplicate] | Achievable Agricultural Potential (12) | Quantifiable Objective (13) |
|---------------------------------|---|---|
| 167 | <1 TAF per year | <1 TAF per year |
| 168 | 6.1 TAF per year plus additional water generated through reduction in application through improved irrigation systems | 6.1 TAF per year plus additional water generated through reduction in application through improved irrigation systems |
| 169 | TBD | TBD |
| 170 | TBD | TBD |

| Table A.15.5. Affected Flow Paths and Possible Actions, Sub-Region 15, Mid-Valley Area | | |
|---|-------------------------------------|--|
| TB # (1) [duplicate] | Affected Flow Paths (14) | Possible Actions (provided as examples; proposers are encouraged to consider local actions that are not listed) (15) |
| 167 | Percolation to Groundwater | Improve farm irrigation management (such as irrigation scheduling) and more uniform irrigation methods (such as shorter furrows, sprinkler, or drip). |
| 168 | ETAW | Reduce ET flows using improved irrigation methods, such as drip irrigation, and planting densities. |
| 169 | TBD | TBD |
| 170 | TBD | TBD |

Detail 167, Reduce Groundwater Flows to Salt Sinks

1. Quantified Targets

Reduce unwanted flows to salt sinks in Subregion 15

2. Reference Condition

A. Groundwater Return Sub-Region 15 * Step 4. (outflow, recoverable)

source: CVGSM Sub-Region 15

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| 2) Dry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 3) B Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 4) A Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 5) Wet | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| Wtd Avg. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |

3. Quantified Targeted Benefit Change

A. Quantified Targeted Benefit Change for Sub-Region 15

source: DWR - San Joaquin Valley Drainage Monitoring Program (December, 1998)

| | Acre Feet | | | | | | | | | | | | |
|----------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| All Year | | | | | | | | | | | | | |
| Types | | | 0 | 25 | 25 | 14 | 5 | 6 | 6 | 2 | 2 | 0 | 85 |

4. Area Affected By Targeted Benefit

A. Ratio of Tiled Acres to Total Acres in Subregion

source: DWR - San Joaquin Valley Drainage Monitoring Program (December, 1998)

| | | |
|-------------|--------------------------|---------------------------|
| Tiled Acres | Total Acres in Subregion | Tiled as Percent of Total |
| 1,240 | 884,275 | 0.1% |

5. Water Balance - Flow Path Elements

A. Rain Sub-Region 15 * Step 4. (inflow)

source: CVGSM Sub-Region 15

| | Flow Path Not Affected Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 2) Dry | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.4 |
| 3) B Norm | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.5 |
| 4) A Norm | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.5 |
| 5) Wet | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.7 |
| Wtd Avg. | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.5 |

| B. Surface Water Diversions Sub-Region 15 * Step 4. (inflow) | | | | | | | | | | | Flow Path Not Affected | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------------|-----|-------|
| source: CVGSM Sub-Region 15 | | | | | | | | | | | Thousand Acre Feet | | |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| 2) Dry | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| 3) B Norm | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |
| 4) A Norm | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 |
| 5) Wet | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 1.1 |
| Wtd Avg. | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |

| C. Import Sub-Region 15 * Step 4. (inflow) | | | | | | | | | | | Flow Path Not Affected | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------------|-----|-------|
| source: CVGSM Sub-Region 15 | | | | | | | | | | | Thousand Acre Feet | | |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| 2) Dry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 3) B Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 4) A Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 5) Wet | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| Wtd Avg. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |

| D. Groundwater Pumping Sub-Region 15 * Step 4. (inflow) | | | | | | | | | | | Flow Path Not Affected | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------------|-----|-------|
| source: CVGSM Sub-Region 15 | | | | | | | | | | | Thousand Acre Feet | | |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.2 | 0.1 | 0.3 | 0.2 | 0.2 | 0.4 | 0.5 | 0.4 | 0.1 | 0.1 | 0.0 | 0.0 | 2.5 |
| 2) Dry | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.4 | 0.5 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 2.2 |
| 3) B Norm | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.4 | 0.4 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 1.9 |
| 4) A Norm | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.4 | 0.4 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 1.8 |
| 5) Wet | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.4 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 |
| Wtd Avg. | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.4 | 0.4 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 2.0 |

| E. ET Rain Sub-Region 15 * Step 4. (outflow, irrecoverable) | | | | | | | | | | | Flow Path Not Affected | | |
|---|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------------|-----|-------|
| source: CVGSM Sub-Region 15 | | | | | | | | | | | Thousand Acre Feet | | |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.3 |
| 2) Dry | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.3 |
| 3) B Norm | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.4 |
| 4) A Norm | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.4 |
| 5) Wet | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.4 |
| Wtd Avg. | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.3 |

| F. Runoff from Rain Sub-Region 15 * Step 4. (outflow, irrecoverable) | | | | | | | | | | | Flow Path Not Affected | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------------|-----|-------|
| source: CVGSM Sub-Region 15 | | | | | | | | | | | Thousand Acre Feet | | |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 2) Dry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3) B Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 4) A Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 5) Wet | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Wtd Avg. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |

| G. ETAW Sub-Region 15 * Step 4. (outflow, irrecoverable) | | | | | | | | | | | | | Flow Path Not Affected |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------------|
| source: CVGSM Sub-Region 15 | | | | | | | | | | | | | Thousand Acre Feet |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.2 | 0.0 | 0.1 | 0.2 | 0.2 | 0.4 | 0.5 | 0.5 | 0.1 | 0.1 | 0.0 | 0.0 | 2.3 |
| 2) Dry | 0.1 | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.1 | 0.1 | 0.0 | 0.0 | 2.3 |
| 3) B Norm | 0.1 | 0.0 | 0.1 | 0.1 | 0.3 | 0.4 | 0.5 | 0.5 | 0.1 | 0.1 | 0.0 | 0.0 | 2.2 |
| 4) A Norm | 0.1 | 0.0 | 0.1 | 0.1 | 0.3 | 0.4 | 0.5 | 0.5 | 0.1 | 0.1 | 0.0 | 0.0 | 2.2 |
| 5) Wet | 0.1 | 0.0 | 0.1 | 0.1 | 0.3 | 0.4 | 0.5 | 0.5 | 0.1 | 0.1 | 0.0 | 0.0 | 2.2 |
| Wtd Avg. | 0.1 | 0.0 | 0.1 | 0.1 | 0.3 | 0.4 | 0.5 | 0.5 | 0.1 | 0.1 | 0.0 | 0.0 | 2.3 |

| H. Export Sub-Region 15 * Step 4. (outflow, irrecoverable) | | | | | | | | | | | | | Thousand Acre Feet |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|
| source: CVGSM Sub-Region 15 | | | | | | | | | | | | | Thousand Acre Feet |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2) Dry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3) B Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4) A Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5) Wet | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Wtd Avg. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| I. Surface Water Return Sub-Region 15 * Step 4. (outflow, recoverable) | | | | | | | | | | | | | Thousand Acre Feet |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|
| source: CVGSM Sub-Region 15 | | | | | | | | | | | | | Thousand Acre Feet |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| 2) Dry | 0.0 | 0.1 | 0.2 | 0.1 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| 3) B Norm | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| 4) A Norm | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| 5) Wet | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| Wtd Avg. | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |

| J. Groundwater Return Sub-Region 15 * Step 4. (outflow, recoverable) | | | | | | | | | | | | | Thousand Acre Feet |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|
| source: CVGSM Sub-Region 15 | | | | | | | | | | | | | Thousand Acre Feet |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| 2) Dry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 3) B Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 4) A Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 5) Wet | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| Wtd Avg. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |

| K. Evaporation Flows Sub-Region 15 * Step 4. (outflow, irrecoverable) | | | | | | | | | | | | | Thousand Acre Feet |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|
| source: = .02 * (5.B + 5.C - 5.H) | | | | | | | | | | | | | Thousand Acre Feet |
| = .02 * (Surface Water Diversions + Imports - Exports) | | | | | | | | | | | | | Thousand Acre Feet |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2) Dry | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3) B Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4) A Norm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5) Wet | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Wtd Avg. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

L. Sub-Region Water Balance 15 * Step 4.

source: = Step 5.(A + B + C + D) - Step5. (E + F + G + H + I + J + K)
 = (Rain + Surface Water Diversions + Import + Groundwater Pumping) - (ET Rain +
 Runoff from Rain + ETAW + Export + Surface & Groundwater Return + Evapotranspiration)

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|-----|-----|-----|------|-----|-----|-----|------|------|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.1 | 0.0 | 0.0 | -0.1 |
| 2) Dry | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.1 | 0.0 | 0.0 | -0.2 |
| 3) B Norm | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.1 | 0.0 | 0.0 | -0.2 |
| 4) A Norm | 0.1 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | -0.2 | -0.1 | 0.0 | 0.1 | -0.2 |
| 5) Wet | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.1 | 0.0 | 0.1 | -0.2 |
| Wtd Avg. | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.1 | 0.0 | 0.1 | -0.1 |

M. Applied Water Ratio Sub-Region 15 * Step 4.

source: = Step 5.G / Step 5 (B + C + D - H)
 = ETAW/(Surface Water Diversions + Import + Groundwater Pumping - Export)

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.9 | 0.2 | 0.3 | 0.7 | 0.9 | 0.7 | 0.9 | 0.9 | 1.0 | 1.0 | 1.1 | 1.1 | 9.7 |
| 2) Dry | 0.7 | 0.2 | 0.3 | 0.7 | 0.9 | 0.7 | 0.9 | 0.8 | 1.0 | 1.1 | 1.1 | 1.0 | 9.3 |
| 3) B Norm | 0.7 | 0.1 | 0.3 | 0.7 | 0.9 | 0.7 | 0.8 | 0.8 | 1.0 | 1.1 | 1.2 | 0.9 | 9.2 |
| 4) A Norm | 0.6 | 0.2 | 0.3 | 0.7 | 0.9 | 0.7 | 0.8 | 0.8 | 1.0 | 1.0 | 1.1 | 0.8 | 8.8 |
| 5) Wet | 0.5 | 0.2 | 0.3 | 0.7 | 0.8 | 0.7 | 0.8 | 0.8 | 1.0 | 1.1 | 1.1 | 0.9 | 8.9 |
| Wtd Avg. | 0.7 | 0.2 | 0.3 | 0.7 | 0.9 | 0.7 | 0.8 | 0.8 | 1.0 | 1.1 | 1.1 | 0.9 | 9.2 |

N. Groundwater Check Sub-Region 15

source: = Step 5 (J - D)
 = Groundwater Return Flows - Groundwater Pumping

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|------|------|------|------|------|------|------|------|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | -0.1 | -0.1 | -0.3 | -0.2 | -0.2 | -0.4 | -0.4 | -0.4 | -0.1 | 0.0 | 0.0 | 0.0 | -2.2 |
| 2) Dry | -0.1 | -0.1 | -0.2 | -0.1 | -0.1 | -0.3 | -0.4 | -0.3 | 0.0 | 0.0 | 0.0 | 0.0 | -1.8 |
| 3) B Norm | -0.1 | 0.0 | -0.2 | -0.1 | -0.1 | -0.3 | -0.4 | -0.3 | 0.0 | 0.0 | 0.0 | 0.0 | -1.5 |
| 4) A Norm | -0.1 | 0.0 | -0.1 | -0.1 | -0.1 | -0.3 | -0.4 | -0.3 | 0.0 | 0.0 | 0.0 | 0.0 | -1.4 |
| 5) Wet | -0.1 | 0.0 | 0.0 | 0.0 | -0.1 | -0.2 | -0.3 | -0.3 | 0.0 | 0.0 | 0.0 | 0.0 | -1.0 |
| Wtd Avg. | -0.1 | -0.1 | -0.2 | -0.1 | -0.1 | -0.3 | -0.4 | -0.3 | 0.0 | 0.0 | 0.0 | 0.0 | -1.6 |

6. Idealized Agricultural Potential

A. Export Adjustment

0% of Export (Step 5H.) water is available for flow/timing changes in Sub-Region Detail
 note: Import (Step 5C) and Export (Step 5H) are in the water balance. In this Step (7D) Export water
 is considered water that flows through districts in Sub-Regions 4, 5, and 7. This water is available
 to make flow/timing changes

| | Thousand Acre Feet | | | | | | | | | | | | |
|---------------------------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| source: CVGSM Sub-Region Detail | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.0 |
| 2) Dry | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.0 |
| 3) B Norm | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.0 |
| 4) A Norm | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.0 |
| 5) Wet | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.0 |
| Wtd Avg. | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.0 |

B. Idealized Agricultural Potential

source: = Step 5 ((B + C + D) + Step 6A. - Step 5 (G + H))

= Surface Water Diversions + Import + Groundwater Diversions) - (ETAW + Export
+ Export Adjustment)

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | --- | --- | 0.3 | 0.1 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | --- | --- | 0.7 |
| 2) Dry | --- | --- | 0.2 | 0.1 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | --- | --- | 0.7 |
| 3) B Norm | --- | --- | 0.2 | 0.1 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | --- | --- | 0.7 |
| 4) A Norm | --- | --- | 0.2 | 0.1 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | --- | --- | 0.7 |
| 5) Wet | --- | --- | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | --- | --- | 0.7 |
| Wtd Avg. | --- | --- | 0.2 | 0.1 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | --- | --- | 0.7 |

Step 7 Achievable Agricultural Potential

A. Farm Demand

assumes farm loss fraction of 0.13 for Sub-Region 15, values vary by SubRegion

source: = ETAW / Farm High (1- loss fraction)

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | --- | --- | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.5 | 0.2 | 0.1 | --- | --- | 2.4 |
| 2) Dry | --- | --- | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.5 | 0.2 | 0.1 | --- | --- | 2.4 |
| 3) B Norm | --- | --- | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.5 | 0.2 | 0.1 | --- | --- | 2.4 |
| 4) A Norm | --- | --- | 0.1 | 0.2 | 0.3 | 0.5 | 0.6 | 0.5 | 0.2 | 0.1 | --- | --- | 2.4 |
| 5) Wet | --- | --- | 0.1 | 0.1 | 0.3 | 0.5 | 0.6 | 0.5 | 0.2 | 0.1 | --- | --- | 2.3 |
| Wtd Avg. | --- | --- | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.5 | 0.2 | 0.1 | --- | --- | 2.4 |

B. Groundwater Pumping after System Improvements

Existing Farm Efficiency for Sub-Region Detail = 0.70

source: = (1 - 0.7 * (1/0.7-1/(1-Farm Loss Fraction))) * Groundwater Pumping

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1) Critical | --- | --- | 0.3 | 0.1 | 0.2 | 0.3 | 0.4 | 0.4 | 0.1 | 0.0 | --- | --- | 1.8 |
| 2) Dry | --- | --- | 0.2 | 0.1 | 0.1 | 0.3 | 0.4 | 0.3 | 0.1 | 0.0 | --- | --- | 1.5 |
| 3) B Norm | --- | --- | 0.2 | 0.1 | 0.1 | 0.3 | 0.4 | 0.3 | 0.1 | 0.0 | --- | --- | 1.4 |
| 4) A Norm | --- | --- | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.3 | 0.1 | 0.0 | --- | --- | 1.3 |
| 5) Wet | --- | --- | 0.1 | 0.0 | 0.1 | 0.2 | 0.3 | 0.3 | 0.0 | 0.0 | --- | --- | 1.1 |
| Wtd Avg. | --- | --- | 0.2 | 0.1 | 0.1 | 0.3 | 0.4 | 0.3 | 0.1 | 0.0 | --- | --- | 1.5 |

C. Farm Demand not met by Groundwater Pumping

source: = Step 7.A - Step 7.B

= Farm Demand - Groundwater Pumping

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | --- | --- | -0.2 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.0 | --- | --- | 0.6 |
| 2) Dry | --- | --- | -0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.0 | --- | --- | 0.8 |
| 3) B Norm | --- | --- | -0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | --- | --- | 1.0 |
| 4) A Norm | --- | --- | 0.0 | 0.1 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.0 | --- | --- | 1.0 |
| 5) Wet | --- | --- | 0.0 | 0.1 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.0 | --- | --- | 1.3 |
| Wtd Avg. | --- | --- | -0.1 | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 | 0.1 | 0.0 | --- | --- | 0.9 |

D. Water Supplier Delivery to Meet Farm Demand

assumes district loss fraction of 0.08

source: = Step 7C / District High (1- loss fraction)

= Farm Demand not met by Groundwater Pumping/(1 - 0.08)

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | --- | --- | -0.2 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.0 | --- | --- | 0.7 |
| 2) Dry | --- | --- | -0.1 | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 | 0.1 | 0.1 | --- | --- | 0.9 |
| 3) B Norm | --- | --- | -0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.1 | --- | --- | 1.1 |
| 4) A Norm | --- | --- | 0.0 | 0.1 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.0 | --- | --- | 1.1 |
| 5) Wet | --- | --- | 0.0 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.1 | 0.1 | --- | --- | 1.4 |
| Wtd Avg. | --- | --- | -0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.0 | --- | --- | 1.0 |

E. Achievable Agricultural Potential

source = Step 5.(B + C - H) + Step 6A - Step 7D.

= Surface Water Diversions + Import - Export + Export Adjustment - Water Supplier
Delivery to Meet Farm Demand

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | --- | --- | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.2 |
| 2) Dry | --- | --- | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.2 |
| 3) B Norm | --- | --- | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.2 |
| 4) A Norm | --- | --- | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.2 |
| 5) Wet | --- | --- | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.2 |
| Wtd Avg. | --- | --- | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.2 |

F. Groundwater Check after System Improvements

source = (0.13 * 0.80 * ETAW) + (0.04*(Farm Demand w/o Groundwater
- Water Supplier Delivery)) - Groundwater Pumping

| | Thousand Acre Feet | | | | | | | | | | | | |
|-------------|--------------------|-----|------|------|------|------|------|------|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | --- | --- | -0.3 | -0.2 | -0.2 | -0.4 | -0.5 | -0.4 | 0.0 | 0.0 | --- | --- | -2.0 |
| 2) Dry | --- | --- | -0.2 | -0.2 | -0.1 | -0.4 | -0.4 | -0.4 | 0.0 | 0.0 | --- | --- | -1.7 |
| 3) B Norm | --- | --- | -0.2 | -0.1 | -0.1 | -0.3 | -0.4 | -0.4 | 0.0 | 0.0 | --- | --- | -1.5 |
| 4) A Norm | --- | --- | -0.1 | -0.1 | -0.1 | -0.3 | -0.4 | -0.4 | 0.0 | 0.0 | --- | --- | -1.5 |
| 5) Wet | --- | --- | -0.1 | -0.1 | -0.1 | -0.3 | -0.4 | -0.3 | 0.0 | 0.0 | --- | --- | -1.1 |
| Wtd Avg. | --- | --- | -0.2 | -0.1 | -0.1 | -0.4 | -0.4 | -0.4 | 0.0 | 0.0 | --- | --- | -1.6 |

Step 8. Quantifiable Objective

source =min(Step 3A Wtd Avg, Step 7E)

| | Thousand Acre Feet | | | | | | | | | | | | |
|---------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| Wtd Avg | --- | --- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | --- | --- | 0.1 |

Detail 168, Decrease Nonproductive ET, SubRegion 15

Step 1. Quantified Targets

A. Acreage Assumed for Reduction of Nonproductive ET

source: CVGSM Sub-Region 15

| Crop | Potential for ET Red. | Existing | Assumed for ET Reduction* | |
|-------------------|-----------------------|----------|---------------------------|---------|
| | | | acres | percent |
| Pasture | No | 10,000 | 0 | 0% |
| Alfalfa | No | 121,200 | 0 | 0% |
| Sugar Beet | No | 3,800 | 0 | 0% |
| Field | No | 64,100 | 0 | 0% |
| Rice | No | 200 | 0 | 0% |
| Truck | Yes | 7,700 | 2,310 | 30% |
| Tomato | Yes | 2,400 | 720 | 30% |
| Orchard | Yes | 36,700 | 11,010 | 30% |
| Grains | No | 76,900 | 0 | 0% |
| Vineyard | Yes | 53,700 | 16,110 | 30% |
| Cotton | No | 267,300 | 0 | 0% |
| Citrus and Olives | Yes | 1,000 | 300 | 30% |
| Total | | 645,000 | 30,450 | 5% |

*The Assumed Acreage for ET Reduction is 30% of the crops that have the Potential for ET Reduction.

B. Existing ET for Sub-Region 15

source: CVGSM

| Crop | | | | | | | | | | | | | Inches |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| Pasture | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Alfalfa | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sugar Beet | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rice | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Truck | 0.00 | 0.00 | 0.00 | 2.60 | 2.90 | 3.30 | 3.40 | 1.80 | 1.30 | 1.20 | 0.00 | 0.00 | 16.50 |
| Tomato | 0.00 | 0.00 | 0.00 | 3.60 | 6.70 | 7.60 | 5.40 | 1.60 | 1.00 | 0.00 | 0.00 | 0.00 | 25.90 |
| Orchard | 0.90 | 1.30 | 1.70 | 2.90 | 4.90 | 6.00 | 6.70 | 5.70 | 3.50 | 2.10 | 1.00 | 0.70 | 37.40 |
| Grains | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Vineyard | 0.00 | 0.00 | 0.00 | 1.00 | 3.70 | 5.80 | 6.60 | 5.50 | 3.50 | 1.30 | 0.00 | 0.00 | 27.40 |
| Cotton | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Citrus and Olives | 0.00 | 0.00 | 1.90 | 2.70 | 4.20 | 4.80 | 5.00 | 4.20 | 2.80 | 2.00 | 0.00 | 0.00 | 27.60 |
| Total | 0.33 | 0.47 | 0.63 | 1.89 | 4.15 | 5.72 | 6.35 | 5.19 | 3.27 | 1.56 | 0.36 | 0.25 | 30.16 |

C. ET from Rain for Sub-Region 15

source: CVGSM

| | | | | | | | | | | | | | Inches |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 1) Critical | 0.00 | 0.38 | 0.39 | 0.44 | 0.42 | 0.00 | 0.10 | 0.02 | 2.26 | 0.95 | 0.21 | 0.01 | 5.19 |
| 2) Dry | 0.00 | 0.55 | 0.61 | 0.36 | 0.34 | 0.00 | 0.10 | 0.01 | 2.15 | 0.93 | 0.11 | 0.00 | 5.16 |
| 3) B Norm | 0.00 | 0.66 | 0.56 | 0.53 | 0.36 | 0.00 | 0.10 | 0.00 | 2.12 | 0.93 | 0.17 | 0.02 | 5.45 |
| 4) A Norm | 0.00 | 0.61 | 0.74 | 0.61 | 0.16 | 0.00 | 0.07 | 0.01 | 2.17 | 1.01 | 0.09 | 0.00 | 5.46 |
| 5) Wet | 0.01 | 0.64 | 1.00 | 0.85 | 0.28 | 0.00 | 0.04 | 0.02 | 2.05 | 0.96 | 0.16 | 0.00 | 6.02 |
| Wtd Avg. | 0.00 | 0.55 | 0.64 | 0.54 | 0.32 | 0.00 | 0.08 | 0.01 | 2.16 | 0.96 | 0.15 | 0.01 | 5.42 |

D. Existing ETAW for Sub-Region 15

source: calculated = Step 1B.(Average Total) - Step 1C., (set to 0 if Step 1B. - Step 1C. <0)

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1) Critical | 0.33 | 0.09 | 0.24 | 1.45 | 3.73 | 5.72 | 6.25 | 5.17 | 1.01 | 0.61 | 0.15 | 0.24 | 24.97 |
| 2) Dry | 0.33 | 0.00 | 0.03 | 1.53 | 3.81 | 5.72 | 6.25 | 5.17 | 1.12 | 0.63 | 0.25 | 0.25 | 25.07 |
| 3) B Norm | 0.33 | 0.00 | 0.07 | 1.36 | 3.79 | 5.72 | 6.25 | 5.19 | 1.15 | 0.63 | 0.19 | 0.23 | 24.89 |
| 4) A Norm | 0.33 | 0.00 | 0.00 | 1.28 | 3.99 | 5.72 | 6.28 | 5.18 | 1.09 | 0.55 | 0.27 | 0.25 | 24.95 |
| 5) Wet | 0.32 | 0.00 | 0.00 | 1.03 | 3.87 | 5.72 | 6.31 | 5.17 | 1.21 | 0.59 | 0.20 | 0.25 | 24.67 |
| Wtd Avg. | 0.32 | 0.02 | 0.08 | 1.35 | 3.83 | 5.72 | 6.27 | 5.18 | 1.10 | 0.60 | 0.21 | 0.25 | 24.92 |

E. Target ETAW for Sub-Region 15

source: calculated = Step 1D. * 90%

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1) Critical | 0.29 | 0.08 | 0.22 | 1.30 | 3.35 | 5.14 | 5.62 | 4.65 | 0.91 | 0.55 | 0.14 | 0.22 | 22.47 |
| 2) Dry | 0.29 | 0.00 | 0.02 | 1.38 | 3.43 | 5.14 | 5.62 | 4.66 | 1.01 | 0.57 | 0.22 | 0.23 | 22.56 |
| 3) B Norm | 0.29 | 0.00 | 0.06 | 1.22 | 3.41 | 5.14 | 5.62 | 4.67 | 1.03 | 0.57 | 0.17 | 0.21 | 22.40 |
| 4) A Norm | 0.29 | 0.00 | 0.00 | 1.15 | 3.59 | 5.14 | 5.65 | 4.66 | 0.98 | 0.50 | 0.25 | 0.23 | 22.45 |
| 5) Wet | 0.28 | 0.00 | 0.00 | 0.93 | 3.48 | 5.14 | 5.68 | 4.65 | 1.09 | 0.53 | 0.18 | 0.23 | 22.20 |
| Wtd Avg. | 0.29 | 0.02 | 0.07 | 1.21 | 3.45 | 5.14 | 5.64 | 4.66 | 0.99 | 0.54 | 0.19 | 0.22 | 22.43 |

Step 2. Reference Condition

For ET Reduction the Reference Condition is the existing Crop ET, Step 1B.

Step 3. Quantified Targeted Benefit Change

A. Quantified Targeted Benefit Change for Sub-Region 15

source: calculated = Step 1D - Step 1E

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|-------------|-----|-----|-----|------|------|------|------|------|------|------|-----|-----|-------|
| 1) Critical | --- | --- | --- | 0.14 | 0.37 | 0.57 | 0.62 | 0.52 | 0.10 | 0.06 | --- | --- | 2.39 |
| 2) Dry | --- | --- | --- | 0.15 | 0.38 | 0.57 | 0.62 | 0.52 | 0.11 | 0.06 | --- | --- | 2.42 |
| 3) B Norm | --- | --- | --- | 0.14 | 0.38 | 0.57 | 0.62 | 0.52 | 0.11 | 0.06 | --- | --- | 2.41 |
| 4) A Norm | --- | --- | --- | 0.13 | 0.40 | 0.57 | 0.63 | 0.52 | 0.11 | 0.06 | --- | --- | 2.41 |
| 5) Wet | --- | --- | --- | 0.10 | 0.39 | 0.57 | 0.63 | 0.52 | 0.12 | 0.06 | --- | --- | 2.39 |
| Wtd Avg. | --- | --- | --- | 0.13 | 0.38 | 0.57 | 0.63 | 0.52 | 0.11 | 0.06 | --- | --- | 2.40 |

B. Quantified Targeted Benefit Change for Sub-Region 15

source: calculated = Step 1D - Step 1E

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|-------------|-----|-----|-----|------|------|------|------|------|------|------|-----|-----|-------|
| 1) Critical | --- | --- | --- | 0.37 | 0.95 | 1.45 | 1.59 | 1.31 | 0.26 | 0.15 | --- | --- | 6.1 |
| 2) Dry | --- | --- | --- | 0.39 | 0.97 | 1.45 | 1.59 | 1.31 | 0.28 | 0.16 | --- | --- | 6.1 |
| 3) B Norm | --- | --- | --- | 0.34 | 0.96 | 1.45 | 1.59 | 1.32 | 0.29 | 0.16 | --- | --- | 6.1 |
| 4) A Norm | --- | --- | --- | 0.32 | 1.01 | 1.45 | 1.59 | 1.31 | 0.28 | 0.14 | --- | --- | 6.1 |
| 5) Wet | --- | --- | --- | 0.26 | 0.98 | 1.45 | 1.60 | 1.31 | 0.31 | 0.15 | --- | --- | 6.1 |
| Wtd Avg. | --- | --- | --- | 0.34 | 0.97 | 1.45 | 1.59 | 1.31 | 0.28 | 0.15 | --- | --- | 6.1 |

Step 4. Area Affected by Targeted Benefit

Area affected are the 30,450 acres identified in Step 1A.

Step 5. Water Flow Path Elements

The flow path elements used in this analysis are given in Step 1.

Step 6. Idealized Agricultural Potential

Additional ET research is required to determine this component.

Step 7. Achievable Agricultural Potential

The farm Available Agricultural Potential is the same as Step 3B.

Step 8. Quantifiable Objective

A. For ET Reduction the Quantifiable Objective is Step 3B